TCI Telecomunicazioni Italia S.r.l.
Via Parma 14,
Saronno (VA), Italy

Product Environmental Profile

Direct Current Dimmable Electronic Driver

TCI Telecomunicazioni S.r.l. General Information

TCI Telecomunicazioni Italia S.r.l. (hereinafter "TCI") is part of the TCI Group, an international leader in the production and marketing of electrical and electronic equipment for industrial automation and digital communications and in the production and sale of electronic components for lighting.

The products covered by the present Product Environmental Profile are assembled in the plant located in in Via Parma 14, Saronno (VA), Italy.

For more details regarding TCI and the products cover by the PEP, visit https://www.tci.it/

Contact details for questions related to the PEP: g.spalice@tci.it

Reference Product

Reference article **SVM 110/700-2100 NFC (article code 142072)**

Description Direct current dimmable electronic driver with NFC

Rated Voltage	220 ÷ 240 V
Frequency	50-60 Hz
AC Operation range	198 ÷ 264 V
DC Operation range	176 ÷ 276 V
Power	17 ÷ 110 W
iTHD	≤ 10%
Stand by power	≤ 0,5 W
Output current ripple	≤ 3%
In rush current	10A 200µsec

P out W	V out DC	I out DC	U out V	ta °C	tc °C	λ max. Power Factor	ή max. Efficiency
110	25...54	700...2100 mA cost	60	-25..+50	80	0.85 C	>92%

Lifetime 10 years
The declared lifetime is valid only when the driver is operated for max. 13h/day in accordance to all technical information and lifetime stated by the manufacturer.

Standards compliance EN 55015; EN 61000-3-2; EN 61000-3-3; EN 61347-1; EN 61347-2-13; EN 61547

Functional Unit

Converting the energy necessary to power a luminaire in accordance with the reference usage scenario and during the reference service life of 1 unit.

The functional unit is in compliance with the prescription of IEC 61347-2-13 and IEC 61347-1

Products included in the PEP

The following series belong to the same homogeneous environmental family as the reference product. The weight and power indicated in the table above represent the driver of the serie with the highest weight and power out. Therefore, using a conservative approach they can be considered representative of the other articles included in the same series.

The specific technical data of each product are available in the catalogue available at https://www.tci.it/prodotti/alimentatori-led/

SERIES	Weight (g)	Power (W)	Efficiency (%)
MPXM Series	264	165	0.96
SVM Series	264	85	0.92
T-LED Serie	257	150	0.94

Materials and Substances

The product respects the restrictions of substances specified in the RoHS directive.

Material type	Weight (g)	Share (%)
MAIN PRODUCT		
Other	193,314	62,5%
Metal	99,600	32,2%
Plastic	5,860	1,9%
PACKAGING		
Cardboard	10.533	3.4%
TOTAL	**309.307**	

Manufacturing

These products are manufactured by a site that has received an environmental certification ISO 14001. In consideration of the fact that all the production occurs in the site located in Italy, the Italian residual mix (medium voltage) has been considered.

Distribution

The products are distributed from TCI Telecomunicazioni Italia S.r.l. plant located in Via Parma 14, Saronno (VA), Italy. The Reference Product is distributed in Europe.
The packaging complies with the European Directive 2004/12/EC on packaging and on waste coming from packaging and the Italian transposition decree (Legislative Decree 152/06 and subsequent amendments).

Installation

Installation processes:
The impact associated with the installation of the product is considered negligible and therefore not accounted for. Only the end of life scenario of the packaging material is considered in this phase.

Installation elements (non delivered with the product):
Elements not delivered with the product and needed to install the product are not considered.

Use

The driver has a service life communicated by TCI of 10 years, provided that the appliance is used for 13 hours a day maximum. During the service life, no maintenance or replacement of components is required.

The model considers the driver to be used in an office environment with the following modalities:

- Working days per year: 261 (considering a week Mon to Fri)
- Working hours per day: 8

- Working hours per reference life: 20.880

The driver is considered to be operated at full power (110 W) with an efficiency of 92%, with an energy consumption dissipated by the driver of 8,8 W.

For the remaining hours (16 hours per working day and 24 hours on weekends) the driver is considered to be in standby mode with a power of 0,5 W in accordance with technical data sheet and European regulations. The power considered in stand by mode is precautionary since the power is required to be below 0,5 W.

In consideration of the fact that 100% of the products are distributed to the European market, a European mix (low voltage) has been considered.

End of Life

Considering the complexity and the lack of knowledge of the electric and electronic recycling channel and processes, the Eurostat 2022 data (Waste_electrical_and_electronic_equipment_2024-10) were used.

	ton	%
Total put on the market	14,435.72	
Total collected	4,988.14	34.55%
Total treatment	4,874.88	33.77%
Total recovered (incl. recycling, energy recovery…)	4,474.42	31.00%
Total reused and recycled	4,026.38	27.89%

Environmental Impacts

Evaluation of the environmental impact covers the following life cycle stages: raw materials, manufacturing, distribution, installation, use and end of life (EoL).

Software	Simapro 10.2.0.2
Database	Ecoinvent 3.11
Data reference year	2024
Geographical representativeness	Europe
Energy models	Manufacturing: Italian residual mix – Medium Voltage Use: European mix – Low Voltage

Categoria di danno	**Unit**	**Manufacturing**	**Distribution**	**Installation**	**Use**	**End of Life**	**Tot**
Climate change - total	kg CO2 eq	8.29E+00	2.28E-02	4.29E-02	6.86E+01	1.96E-01	**7.72E+01**
Climate change - Fossil	kg CO2 eq	8.21E+00	2.28E-02	1.80E-03	6.60E+01	6.00E-02	**7.43E+01**
Climate change - Biogenic	kg CO2 eq	7.21E-02	4.16E-06	4.11E-02	2.39E+00	1.36E-01	**2.64E+00**
Climate change - Land use and LU change	kg CO2 eq	1.24E-02	1.16E-06	9.63E-08	2.01E-01	1.03E-05	**2.13E-01**
Ozone depletion	kg CFC11 eq	9.86E-04	2.70E-10	2.11E-11	1.00E-06	6.41E-10	**9.87E-04**
Acidification	mol H+ eq	1.15E-01	6.43E-05	1.23E-05	3.21E-01	1.76E-04	**4.36E-01**

Categoria di danno	Unit	Manufacturing	Distribution	Installation	Use	End of Life	Tot
Eutrophication, freshwater	kg P eq	5.59E-06	1.59E-07	9.25E-08	6.60E-03	2.50E-06	**6.61E-03**
Eutrophication, marine	kg N eq	4.94E-04	2.23E-05	1.72E-05	4.20E-02	1.27E-04	**4.27E-02**
Eutrophication, terrestrial	mol N eq	3.00E-01	2.45E-04	5.55E-05	4.72E-01	6.25E-04	**7.73E-01**
Photochemical ozone formation	kg NMVOC eq	1.89E+01	9.16E-05	2.84E-05	1.52E-01	2.64E-04	**1.90E+01**
Resource use, minerals and metals	kg Sb eq	1.52E-06	1.86E-09	1.56E-10	4.41E-06	4.49E-09	**5.94E-06**
Resource use, fossils	MJ	4.08E+00	2.98E-01	2.29E-02	1.58E+03	7.21E-01	**1.59E+03**
Water use	m3 depriv.	1.02E+02	3.96E-04	7.17E-05	1.43E+01	-3.10E-02	**1.17E+02**
Particulate matter	disease inc.	1.31E-03	1.45E-09	1.29E-10	7.26E-07	3.58E-09	**1.31E-03**
Ionising radiation	kBq U-235 eq	2.09E+00	2.31E-05	1.92E-06	1.44E+01	2.28E-04	**1.65E+01**
Ecotoxicity, freshwater	CTUe	2.03E-01	3.00E-02	9.54E-02	1.27E+02	1.94E+00	**1.29E+02**
Human toxicity, cancer	CTUh	2.65E-11	1.62E-12	2.85E-11	7.10E-09	7.21E-12	**7.17E-09**
Human toxicity, non-cancer	CTUh	7.14E-10	1.46E-10	3.22E-09	3.44E-07	9.20E-10	**3.49E-07**
Land use	Pt	1.12E-01	3.14E-03	5.66E-03	1.79E+02	1.18E-01	**1.80E+02**
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	1.02E+01	5.35E-04	4.69E-05	3.91E+02	6.39E-03	**4.01E+02**
Use of renewable primary energy resources used as raw materials	MJ	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.35E-01**
Total use of renewable primary energy resources	MJ	1.04E+01	5.35E-04	4.69E-05	3.91E+02	6.39E-03	**4.01E+02**
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	4.04E+00	2.98E-01	2.29E-02	1.62E+03	7.22E-01	**1.62E+03**
Use of non-renewable primary energy resources used as raw materials	MJ	4.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**4.94E-01**
Total use of non-renewable primary energy resources	MJ	4.54E+00	2.98E-01	2.29E-02	1.62E+03	7.22E-01	**1.62E+03**
Secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Net use of fresh water	m3	6.85E-02	1.32E-05	2.47E-06	9.75E-01	-7.03E-04	**1.04E+00**

Categoria di danno	Unit	Manufacturing	Distribution	Installation	Use	End of Life	Tot
Total use of primary energy during the life cycle	MJ	1.06E-01	1.60E-05	1.95E-06	1.51E-07	2.95E-03	**1.09E-01**
Hazardous waste disposed	kg	6.16E+00	1.35E-03	2.52E-05	1.21E-05	1.67E+02	**1.73E+02**
Non-hazardous waste disposed	kg	1.95E-04	2.55E-06	1.30E-08	1.09E-09	1.17E-02	**1.19E-02**
Radioactive waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Component for reuse	kg	8.68E-02	6.00E-03	0.00E+00	0.00E+00	6.53E-02	**1.58E-01**
Material for recicling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Material for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Biogenic carbon content of the product	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
Biogenic carbon content of the associated packaging	kg of C	2.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.71E+00**

*Negative values in the EoL phase are linked to the use of the dataset Municipal solid waste {RoW}| treatment of municipal solid waste, sanitary landfill | Cut-off, U

Extrapolation Coefficients

The extrapolation coefficients are given for the environmental impact of the FU, which is "*Converting the energy necessary to power a luminaire in accordance with the reference usage scenario and during the reference service life of 1 unit*".
To evaluate the environmental impact of another product covered by this PEP, multiply the impact figures by the corresponding factor:

PRODUCT - SERIES	Manufacturing	Distribution	Installation	Use	End of life
MPXM Series	0,884	0,884	0,884	0,788	0,884
SVM Series	0,884	0,884	0,884	0,808	0,884
T-LED Serie	0,884	0,884	0,884	1,019	0,884

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	Supplemented by
Verifier accreditation N°: VH51	Information and reference documents: **www.pep-ecopassport.org**
Date of issue: 1 0 -2025	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006 Internal ○ External ●	
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)	
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 The components of the present PEP may not be compared with components from any other program.	
Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"	